



SEPTEMBER 2023

GUINEA'S BOOMING BAUXITE INDUSTRY HOW MUCH IS TOO MUCH?

A CONFIDENTIAL REPORT PREPARED BY CM GROUP

CONDITIONS OF USE

THIS REPORT HAS BEEN PREPARED BY THE CM GROUP.NET PTY LTD (ABN 69 089 166 512) (CM GROUP).

COPYRIGHT AND TRADE MARKS

CM GROUP IS THE OWNER OF THE COPYRIGHT AND ALL OTHER INTELLECTUAL PROPERTY RIGHTS IN THIS REPORT.

THE REPORT HAS BEEN PREPARED FOR THE CLIENT TO USE FOR ITS OWN INTERNAL PURPOSES. THE REPORT MUST NOT BE COPIED (EITHER IN WHOLE OR PART), DISTRIBUTED TO, USED OR RELIED ON BY ANY OTHER PERSON WITHOUT CM GROUP'S PRIOR WRITTEN CONSENT.

THE CM GROUP IS ALSO THE OWNER OF THE CM GROUP TRADE MARKS (WHETHER REGISTERED OR UNREGISTERED) AND EXPRESSLY PROHIBITS ANY USE OF THOSE TRADE MARKS FOR ANY PURPOSE UNLESS WITH THE CM GROUP'S PRIOR WRITTEN CONSENT OR AS OTHERWISE PERMITTED BY LAW.

DISCLAIMER

THIS REPORT HAS BEEN PREPARED ON THE BASIS OF ORIGINAL, INDEPENDENT RESEARCH BY THE CM GROUP. IT IS BASED ON INFORMATION AVAILABLE AT THE TIME THE REPORT WAS COMPILED, FROM SOURCES BELIEVED TO BE RELIABLE. WHILE THE CM GROUP HAS TAKEN CARE IN PREPARING THE REPORT, UNLESS SPECIFICALLY IMPLIED BY LAW, IT DOES NOT MAKE ANY REPRESENTATION OR WARRANTY THAT THE MATERIAL IN THE REPORT IS ACCURATE, COMPLETE OR UP TO DATE. THE CM GROUP IS UNDER NO OBLIGATION TO UPDATE THE MATERIAL IN THE REPORT IN FUTURE. THE CLIENT SHOULD MAKE ITS OWN ENQUIRIES TO SATISFY ITSELF AS TO THE CORRECTNESS AND CURRENCY OF THE MATERIAL PRESENTED.

SECURITIES AND OTHER PRODUCTS

THIS REPORT DOES NOT CONSTITUTE A RECOMMENDATION, INVITATION OR OFFER TO BUY OR SELL ANY SECURITY, STOCK, BUSINESS OR OTHER PRODUCT OR SERVICE IN ANY JURISDICTION, OR TO ENGAGE IN OR REFRAIN FROM ENGAGING IN ANY OTHER TRANSACTION.

COST AND MARKET ESTIMATES

THE CM GROUP ESTIMATES COSTS AND MARKET CHANGES BY EVALUATING INDUSTRY MARKET CONDITIONS AND GATHERING AVAILABLE INFORMATION AND DATA FROM THIRD PARTY SOURCES, AS OPERATING COMPANIES DO NOT GENERALLY DISCLOSE THEIR POSITIONS FOR INDIVIDUAL OPERATIONS.

AVAILABLE DATA VARIES GREATLY BETWEEN PROJECTS. IN PARTICULAR, FORECAST COSTS AND MARKET VOLUMES EMBODY A NUMBER OF SIGNIFICANT ASSUMPTIONS WITH RESPECT TO EXCHANGE RATES AND TECHNICAL VARIABLES. BECAUSE OF THESE FACTORS, DIRECT COMPARABILITY BETWEEN INDIVIDUAL FORECAST PROJECT COSTS AND MARKETS MAY BE LIMITED, AND SUCH COST AND MARKET ESTIMATES MUST BE TREATED WITH CAUTION.

FORWARD-LOOKING STATEMENTS

WITHOUT LIMITING THE FOREGOING, THIS REPORT CONTAINS FORWARD-LOOKING STATEMENTS WHICH ARE IDENTIFIED BY WORDS SUCH AS 'MAY', 'COULD', 'BELIEVES', 'ESTIMATES', 'TARGETS', 'EXPECTS', 'INTENDS' AND OTHER SIMILAR WORDS THAT INVOLVE RISKS AND UNCERTAINTIES.

THESE STATEMENTS ARE BASED ON AN ASSESSMENT OF PRESENT ECONOMIC AND OPERATING CONDITIONS, AND ON A NUMBER OF ASSUMPTIONS REGARDING FUTURE EVENTS AND ACTIONS THAT, AT THE DATE OF THIS REPORT, ARE EXPECTED TO TAKE PLACE.

SUCH FORWARD-LOOKING STATEMENTS ARE NOT GUARANTEES OF FUTURE PERFORMANCE AND INVOLVE KNOWN AND UNKNOWN RISKS, UNCERTAINTIES, ASSUMPTIONS AND OTHER IMPORTANT FACTORS, WHICH ARE BEYOND THE CONTROL OF THE CM GROUP AND WHICH COULD CAUSE THE ACTUAL OUTCOMES TO DIFFER MATERIALLY FROM THE OUTCOMES EXPRESSED OR ANTICIPATED IN THE FORWARD-LOOKING STATEMENTS.

THE CM GROUP CANNOT AND DOES NOT GIVE ANY ASSURANCE THAT THE RESULTS, PERFORMANCE OR ACHIEVEMENTS EXPRESSED OR IMPLIED BY THE FORWARD-LOOKING STATEMENTS CONTAINED IN THIS REPORT WILL ACTUALLY OCCUR AND THE CLIENT IS CAUTIONED NOT TO PLACE UNDUE RELIANCE ON THEM.

LIMITATION OF LIABILITY

TO THE EXTENT PERMITTED BY LAW, NONE OF THE CM GROUP OR ITS OFFICERS, DIRECTORS, EMPLOYEES, AGENTS, INFORMATION PROVIDERS, CONSULTANTS OR SUPPLIERS ACCEPTS ANY LIABILITY (IN NEGLIGENCE OR OTHERWISE) FOR ANY LOSS OR DAMAGE, WHETHER DIRECT OR INDIRECT, SPECIAL, INCIDENTAL, CONSEQUENTIAL OR PUNITIVE, SUSTAINED OR INCURRED BY THE CLIENT OR ANY OTHER PERSON AS A RESULT OF RELIANCE ON ALL OR ANY PART OF THIS REPORT.

Guinea's Booming Bauxite Industry

How Much is Too Much?

Report 2023

A Confidential Report Prepared by the CM Group
2023

[DRAFT]



Table of Contents

1	EXECUTIVE SUMMARY	9
2	INTRODUCTION	23
2.1	DATA SOURCE.....	23
2.2	HISTORY OF GUINEA’S BAUXITE INDUSTRY.....	23
2.3	FIELD STUDIES.....	25
3	RESOURCES, RESERVES AND GRADES	30
3.1	RESOURCES AND RESERVES.....	33
3.2	GRADES.....	36
4	GUINEAN BAUXITE SUPPLY	37
4.1	OVERVIEW.....	37
4.2	MAJOR OPERATIONS.....	41
4.2.1	SMB-WAP.....	41
4.2.2	CBG.....	51
4.2.3	GAC.....	59
4.2.4	Dian Dian (COBAD).....	67
4.2.5	Henan-Chine.....	73
4.2.6	Chalco Boffa.....	79
4.2.7	SPIC.....	85
4.2.8	Bel Air Mining.....	90
4.2.9	CBK – Kindia.....	96
4.2.10	ACG Friguia.....	101
4.3	OTHER OPERATIONS.....	105
4.3.1	SD Mining.....	105
4.3.2	AGB2A-GIC.....	112
4.3.3	Bauxite Kimbo.....	116
4.3.4	Ashapura.....	122
4.3.5	SBG.....	128
4.3.6	AMR.....	133
4.3.7	GDM.....	137
4.4	COMMITTED AND POTENTIAL NEW PROJECTS.....	141
4.4.1	Dynamic Mining – Bon Ami.....	141
4.4.2	AMC.....	146
4.4.3	TBEA.....	150
4.4.4	Sheng Rong Mining.....	153
4.5	SPECULATIVE PROJECTS.....	156
4.5.1	Lindian Resources.....	156
4.5.2	Elite Mining.....	160
4.5.3	Qixing.....	163
4.5.4	Kebo Energy.....	166
4.5.5	FAR.....	168
4.5.6	AIS/Jinjiang.....	171
4.5.7	GBG.....	173
4.5.8	Somalu-Mamou.....	175
4.5.9	Toubal-Tongue.....	177
4.6	OTHER PROJECTS.....	179

5	INFRASTRUCTURE.....	180
5.1	BACKGROUND	180
5.2	BOKÉ CORRIDOR.....	183
5.2.1	<i>Rio Nunez</i>	184
5.2.2	<i>Railways</i>	184
5.2.3	<i>Haul Roads</i>	189
5.2.4	<i>Rio Nunez River Ports</i>	191
5.2.5	<i>Other Infrastructure</i>	202
5.3	CAPE VERGA CORRIDOR.....	203
5.3.1	<i>Haul Roads</i>	203
5.3.2	<i>Cape Verga Sea Ports</i>	205
5.3.3	<i>Proposed New Infrastructure</i>	207
5.4	BOFFA CORRIDOR	208
5.4.1	<i>Conveyor System</i>	209
5.4.2	<i>Haul Roads</i>	210
5.4.3	<i>Rio Pongo River Ports</i>	210
5.4.4	<i>Proposed New Infrastructure</i>	215
5.5	CENTRAL/SOUTHERN CORRIDOR.....	216
5.5.1	<i>Railways</i>	216
5.5.2	<i>Central/South Ports</i>	217
5.5.3	<i>Simandou Infrastructure and Its Potential Impacts</i>	220
5.5.4	<i>Proposed New Infrastructure</i>	221
5.6	NORTHERN CORRIDOR	222
6	DEMAND FOR GUINEAN BAUXITE.....	223
6.1	CHINA	223
6.2	ROW.....	226
6.2.1	<i>Halco Partners</i>	226
6.2.2	<i>UC Rusal</i>	227
6.2.3	<i>The Middle East</i>	228
6.3	DOMESTIC ALUMINA REFINING IN GUINEA	229
6.3.1	<i>ACG Fria</i>	229
6.3.2	<i>Alteo</i>	229
6.3.3	<i>Other Proposed Refineries</i>	231
7	GOVERNMENT POLICY.....	233
7.1	MINING CODE 2011.....	233
7.2	TAXES AND ROYALTIES	235
7.3	CURRENT BAUXITE MINING CONCESSIONS.....	237
7.4	INDEX PRICING	239
7.5	SOCIÉTÉ GUINÉENNE DU PATRIMOINE MINER (SOGUIPAMI).....	243
7.5.1	<i>SOGUIPAMI Organisational Structure</i>	243
7.5.2	<i>Soguipami Shareholding in Guinean Bauxite Projects</i>	245
7.5.3	<i>Marketing Minerals / Sales</i>	246
8	FREIGHT MARKET	247
8.1	FREIGHT COST IMPACT ON DELIVERED PRICE	247
8.2	SHIPPING MARKET DRIVERS.....	248
8.3	ENVIRONMENTAL COMPLIANCE	250

8.4	HISTORICAL AND FORECAST BUNKER PRICES.....	253
8.5	HISTORICAL AND FORECAST TIME CHARTER RATES	254
8.6	FORECAST FREIGHT RATES	255
9	PRODUCTION COSTS.....	256
9.1	PRODUCTION COST ESTIMATES - 2023	256
9.2	DEMAND OUTLOOK	261
9.3	COST OUTLOOK	267
9.3.1	<i>Production Cost Forecasts - 2028.....</i>	<i>267</i>
9.3.2	<i>Production Cost Forecasts - 2033.....</i>	<i>272</i>
9.4	ENABLERS AND CONSTRAINTS.....	277
9.4.1	<i>Enablers.....</i>	<i>277</i>
9.4.2	<i>Constraints.....</i>	<i>278</i>
9.5	GLOBAL COMPETITION.....	282
9.5.1	<i>Other Exporters to China.....</i>	<i>282</i>
9.5.2	<i>Outlook To 2028.....</i>	<i>285</i>
9.5.3	<i>Outlook To 2033.....</i>	<i>288</i>

CM BUSINESS CONSULTING

T +61 8 8294 7261

E INFO@CMGROUP.NET

AUSTRALIA

PO BOX 789 GLENELG

SOUTH AUSTRALIA 5045 AUSTRALIA

CHINA

B1412, COFCO PLAZA

NO. 8 JIANGUOMENNEI AVENUE

BEIJING, 100005

